

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently Amended): A membrane, obtained by a process as claimed in claim 14, wherein the membrane comprises the ceramic coating on and in the polymeric nonwoven,

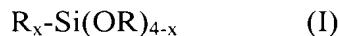
wherein the ceramic coating comprises at least two fractions of oxides selected from the group consisting of Al₂O₃, ZrO₂, TiO₂ and SiO₂, a first ceramic fraction obtained from the sol and a second fraction comprising particles having an average particle size in the range from 200 nm to 5 μm,

wherein the first fraction is present as a layer on the particles of said second fraction,
wherein the second fraction comprises the silicon network bonded (i) via oxygen atoms to said oxides of said ceramic coating, (ii) via organic radicals to said polymeric nonwoven and (iii) via at least one carbon chain to a further silicon atom, and
wherein the ceramic coating comprises from 1 to 30 parts by mass of the first ceramic fraction and from 5 to 94 parts by mass of the second ceramic fraction.

Claims 3-13 (Canceled).

Claim 14 (Currently Amended): A process for producing a membrane, comprising providing a polymeric nonwoven with a ceramic coating in and on said nonwoven by applying a suspension being applied onto and into said polymeric nonwoven and solidifying the suspension to form a ceramic coating being solidified on and in said nonwoven by heating one or more times,

wherein said suspension comprises comprising a sol and at least one fraction of oxidic particles selected from the group consisting of oxides of the elements Al, Zr, Ti and/or and Si, and said suspension having added to it prior to application a mixture of at least two different adhesion promoters which are each based on an alkylalkoxysilane of the general formula I



where x = 1 or 2 and R = organic radical, the R radicals being the same or different,

wherein said adhesion promoters being selected so that both of the adhesion promoters comprise alkyl radicals which at least each comprises a reactive group as a substituent, said reactive group on said alkyl radical of one adhesion promoter reacting with said reactive group of the other adhesion promoter; during the one or more heating steps to form a covalent bond, or one or more adhesion promoters as per the formula I, which have reactive groups which are capable of reacting after the applying, exposing the polymeric nonwoven to under the action of UV radiation to form a covalent bond between [,] the addition of an different adhesion promoters to form the ceramic coating, promoter which reacts under the action of UV radiation being followed by one or more treatments with UV radiation after said suspension has been applied to said polymeric nonwoven wherein the ceramic coating comprises a silicon network bonded (i) via oxygen atoms to said oxides of said ceramic coating, (ii) via organic radicals to said polymeric nonwoven and (iii) via at least one carbon chain to a further silicon atom.

Claim 15 (Previously Presented): The process according to claim 14, wherein the fibers of said polymeric nonwoven used are at least one selected from the group consisting of polyester, polyethylene, polypropylene and polyamide.

Claim 16 (Previously Presented): The process according to claim 14, wherein said suspension comprises at least one sol of a compound of the elements Al, Si, Ti or Zr and is prepared by suspending said fraction of oxidic particles in at least one of these sols.

Claim 17 (Previously Presented): The process according to claim 14, wherein said suspension comprises a polymeric sol of a compound of said silicon.

Claim 18 (Previously Presented): The process according to claim 14, wherein said sols are obtained by hydrolyzing a precursor compound of the elements Al, Zr, Ti or Si with water or an acid or a combination thereof.

Claim 19 (Previously Presented): The process according to claim 14, wherein the mass fraction of the suspended particle fractions is from 1.5 to 150 times the employed first fraction from said sol.

Claim 20 (Currently Amended): The process according to claim 14, wherein the adhesion promoters comprise 3-aminopropyltriethoxysilane (AMEO) and methacryloyloxypropyltrimethoxysilane (MEMO) ~~the adhesion promoters comprise 3-glycidyloxytrimethoxysilane (GLYMO).~~

Claim 21 (Previously Presented): The process according to claim 14, comprising:

reacting a methacryloyloxypropyltrimethoxsilane (MEMO) and
3-glycidyloxytrimethoxysilane (GLYMO) as [[an]] adhesion promoters ~~promoter~~ under the
action of UV radiation.

Claim 22 (Previously Presented): The process according to claim 21, wherein
the reacting with UV radiation is effected before or after said at least single heating.

Claim 23 (Previously Presented): The process according to claim 14, wherein said
suspension present on and in said polymeric nonwoven is solidified by heating to a
temperature in the range from 50 to 350°C.

Claim 24 (Previously Presented): The process according to claim 23, wherein
on a polymeric nonwoven comprising polyester fibers said suspension is heated at a
temperature in the range from 200 to 220°C for from 0.5 to 10 minutes.

Claim 25 (Previously Presented): The process according to claim 23, wherein
on a polymeric nonwoven comprising polyamide fibers said suspension is heated at a
temperature in the range from 130 to 180°C for from 0.5 to 10 minutes.

Claim 26 (Previously Presented): The process according to claim 14, wherein said
suspension comprises at least one sol and at least two fractions of oxidic particles, wherein
the oxidic particles are selected from the group consisting of oxides of Al, oxides of Zr,
oxides of Ti, and oxides of Si, and at least one fraction has an average primary particle size in
the range from 10 nm to 199 nm and comprises from 5 to 50 parts by mass of said suspension

and at least one fraction comprises primary particles having an average particle size in the range from 200 nm to 5 μm and comprises from 30 to 94 parts by mass of said suspension.

Claims 27-33 (Canceled).

Claim 34 (Currently Amended): The membrane of claim [[33]] 2, wherein the at least two different adhesion promoters include methacryloyloxypropyltrimethoxysilane (MEMO) and at least one [[are]] selected from the group consisting of 3-aminopropyltrimethoxysilane[[,]] and 3-glycidyloxytrimethoxysilane,~~and 3-~~ methacryloyloxypropyltrimethoxysilane.